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ChemRisk Repos. No. 2049

**U N C L A S S I F I E D**

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NOTEBOOK NO. A-379

**EXCERPTS**

Assigned to: H. Blauer  
Department: Operations Division  
Location: 3037  
Date: 7-21-52

Run 50 8/18/52 [4-12]  
Run 51 9/23/52 [8-4]

This document has been approved for release  
to the public by:

Daniel R. Hartman 9/8/43  
Technical Information Officer Date  
ORNL Site

8-18-52 1. Millwrights made up & safety bar for the  
8-4 Slag Changer.

R.L.N. 2. Made up 4% caustic in H-10.

3. Took Lagoon Readings, #1 11 tonnes and 3"  
#2 0.69".

4. Brought up & squeegee pump from the  
Electric shop to the office.

5. Continued with sulfur purification.

6. Electrician Repaired switch to Antifoam  
Agitation.

7-Electricians started installing switch box  
for H-7 pump motor at H-7 tank.

8- Started Resin Titration on the Resin  
for Run # 50 3.0M HNO<sub>3</sub> going through  
the column at shift change.

9. Butted down the 0.25 M Na Vels. sample  
in the lab.

8/18/52) Finished Resin Titration & regeneration.

4-12 @ .25M Na Vels result - .24M. Butted up.  
Schmid Result - .249M

RUN  
50

③ continued sulfur purification.

④ continued evaporating.

⑤ Loaded one "W" slug and started 1<sup>st</sup> Coating  
removal at FI cell.

⑥ Loaded 16 "W" slugs in A-1 and took truck  
back to Pile Bldg. at 11:15 PM. At which time  
the Pile boys had knocked off. Talked to  
T. Nixon and he said he might get another  
batch loaded. Load under 3<sup>rd</sup> level crane

8/15

12-

Lam,

8-18-

8-9

Fri.

at shift change.

- " 8/19/52 ① Finish loading 101 W slugs for Rala and  
12-8 made first coating removal. Second coating  
Lampton removal solutions going into A1 at shift  
change.  
② Made second FI coating removal and  
started dissolving.  
③ Continued sulfur purification.  
④ Brought sulfur can from bldg 3001 to bldg  
3032  
⑤ Continued evaporating.  
⑥ Rala status: A1 - slugs and part of 2nd  
coating removal solution

A11 - M.T.

A17 - M.T

A5 - M.T

A6 - M.T

A8+A9 - M.T.

- ⑦ 75 H.P. blower bearings are running hot.

8-19-52 1- INSTS. FINISHED MAKING UP THE PROBE BOX  
isating 8-4 AND LEAD WIRES FOR THE LAGOON WASTE TANK  
R.L.N. AND CHECKED THEM OK.

2- DECON. THE SLUG CHAMBER AND RETAINED  
TO 3019 BLDG.

3- HEATED OUT THREE SULFUR CANS AND STARTED  
EXTRACTION IN E-1.

00611

- 5- 9. 4-Ran steam turbines 4 hours.  
cont. 5-Continued with I<sup>131</sup> dissolving.  
6- Rala Run status,  
A. 1- Third Coating Removal Cooling et.  
Shift Change.

8/12  
8-  
R.L.

- 8/19/52 ① Checked FI dissolving.  
② Continued evaporating.  
Schaick ③ Continued sulfur purification.  
④ Made up CO<sub>2</sub> in A5 & NaOH in M-1.  
⑤ Run status: A1 - Batch A diluted + cooling  
A5 - Na<sub>2</sub>CO<sub>3</sub>

- 8/20/52 ① Took up P<sup>32</sup> extraction and got 500 ml. Started  
reextraction. Boiled down extraction.

Lampton ② Shut down sulfur purification.

③ Finished first sparging still. Second still is ready  
to go. Dropped and sampled scrubber.

④ Washed down Cottrell after A and B batch  
dissolving

⑤ Rala status: A1 - Batch C dissolving

A11 - Batch B

A17 - MT.

A5 - Batch Na<sub>2</sub>CO<sub>3</sub>

M1 - Batch NaOH

IMA - 10.88 slugs

IMB - sampled

Batch A extraction filtering A7 through

P.F.-2 to A8.

8/20,

47

Scha

1- Finished running Spanger still's Boiled down in Room 10 and started the first 8/20/52 scrubber still.

8-9 2- Rate status.

R.L.N. A-1 Batch D DISSOLVING STARTING AT SHIFT CHANGE.

A-11 Batch C Ready for Crud Filtration

A-9 DIGESTING TIL 4:00 P.M.

A-8 HT

A-5 Neutralized Batch A.

A-6 HT

3- BACKWASHED P.F. #1 WITH THREE 4 gal. WATER WASHES TO COLLECT ALL THE PPT. ON P.F. #1 START USING P.F. #1 ON BATCH-B.

4- RAN A FILTRATION TEST ON C.F. #1 AFTER BATCH B FAILED TO GO THROUGH THE RATE WAS ~ 1 gal./min.

8/20/52 ① Continued sulfur purification.

② Continued evaporating.

Schaich ③ C.F. <sup>sump</sup>-W16 jet seems to be plugged.

④ C.F.-1 working fine.

⑤ Electrician replaced cottrell light.

⑥ Called fire Dept. to extinguish burning sulfur in 2032 Bldg. hood. Bottom fell out of reactor and molten sulfur landed on hot plate.

⑦ Finished FI scrubber stills. Boiling down in Room 10 at shift change.

⑧ Boiled down P<sub>2</sub>O<sub>5</sub> extractions. Verbal

to 12-8

(9) Run status: A1 - Batch D (almost there)

A6 - Batch E neut.

A7 - Batch C extraction filtering.

A5, A8, A11, A17 - MT

CF.1 - clean.

M-1 - MT

M-10 - 80"

(10) Coil J leaking at return line in gallery.

(11) Started cleaning up P<sup>32</sup> mess. 12-8 please continue. Hood drain is plugged with sulfur and extinguisher material.

8/21  
4-1

Sch.

8/21/52 ① Sampled st-9. Finished boiling down FI product  
12-8 in room 10 and sampled F-1

Lampton ② P<sup>32</sup> product is in P-2 at shift change.

③ Continued evaporating.

④ Rala status: A1 - Batch E dissolving

A5 - 8 WMC neut

A9 - Batch D extraction filtering to A8

A6, A11, A17 - MT

CF.1 - clean

M1 - 700 lbs caustic

M-10 - 20"

1. Finished I<sup>131</sup> Run and Delivered to Packing.

8/21/52 2 - Rala Run status

④ A-1 Batch F Dissolving.

R-L-N. A-9 Batch E Extraction

A-5 Neutralized Batch D

A-6 MT.

A-8 MT.

A-17 MT.

3- Started checking  $\text{I}^{131}$  dissolution for the leak that has been filling the diss. So we shut off all condensers and steam to the Bayonet.

4- Made up 16 liters of 9.0M  $\text{HNO}_3$  it is OK & has ~~not~~ been labeled.

8/21/52 ① Finished taking-up  $\text{P}^{32}$  product and  
4-12 sampled.

Schaeck ② Continued evaporating. Maintenance repaired  
oil J return line.

③ Had high air count in "C," "D", BB shop, and Metal Recovery Bldgs. at 6:50PM. A6-W9 jet was blowing steam after tank was empty. Highest activity was in lab., rear of "C" Bldg., BB shop, & M.R. Wind blowing from East.

④ Run status: A1 - Batch F dissolving  
A5, A6, A11, A17 - MT.

A9-A8 - Batch E extraction

M-1 - Batch  $\text{Na}_2\text{CO}_3$ .

Blew out PF-1 every 20 min. and washed back every hour with 10# water. [Could not find the right valve to suck it thru].

8/22/52 ① Cannot operate X-valve WCI to tank farm.  
12-8 It seems to be stuck in the open position.  
Lamplon ② Continued evaporating.

8/2  
4  
schr.

③ Rala status: A1 - empty

A5 - neut. 8WME

A6, A11, A17, M1, M10, - M.T.

Batch F filtering A9 To A8

CF-1 - clean.

④ Washed down cottrell precipitator.

⑤ Checked 75 HP fan and it smelled of rubber  
and the bearings were hot.

8/23,

12-

1- Pipefitters Repaired the WCI valve it was  
frozen in the OPEN POSITION.

Lam,

2- Millwrights Repaired the 75 H.P. Blower.

3- Received TWO Truck Loads of Waste  
from Chicago and dumped.

4- Made Hot SINK Check.

5- Painters ~~coated~~ the Product Cans.

8/23,

6- Rala status.

8-3  
P.M.

A-1 MT

A-5 ~~RECEIVED~~ Batch No<sub>2</sub> CO<sub>3</sub>

A-6 ~~RECEIVING~~ RECEIVING 8WME AND EXTRACTION WASHES

A-8 8WME BEING JETTED TO A-11 AND A-6

A-9 - EXTRACTION WASHES

A-11 - MT

A-17 MT

7- MADE UP 3.0 M HNO<sub>3</sub> RESULTS - 2.87 OK

8- DECON. AND STORED SOME COLL-A SAMPLE CANS

8/22/52 ① Washed out drum #66 and brought truck  
4-12 to 900 area. Unloaded truck that was  
several parked at 103 Bldg.

② Continued evaporating.

③ Run status: A1, A11, A17 - MT

A9 - } 1st Meta. filtering thru

A8 - } PF-2, PF-1 plugged.

A6 - 6WMF neut.-Hold.

A5 - MT

8/23/52 ① Continued evaporating

12-8 ② Run status: A1, A5, A11, A17 - MT

Lampton A6 - 6WMF neut.-Hold

A9 - } 1st Meta. filtering thru

A8 } PF-1,

Tried PF-2 and it is plugged. PF-1  
is almost plugged filtering 1 gal/min.

8/23/52 1- P.F. 1 Filter slowed down to ~ .05 gal/min  
tried P.F. 2 with no luck, so shut  
down A-9 Agitator, cut bubble rate  
down Reduced vacuum on A-9 to 1"  
and settled A-9 for 1 hour.

2- After 1 hour settling tried Filters  
A-5 through P.F. 1 to A-8 with no  
luck .05 gal/min.

3- Jetted A-8 to A-5 and sampled  
511C

4. Shut off Jet P.F. to A-8 at 12:15 PM,  
and started settling A-9 for 22 hours  
and decant from A-9 to A-8 with the  
A-9 A-8 D.B. Jet.

5. After decanting A-9 down to 5" sampled  
A-8 solution Code 8WC.

6. Tried filtering A-9 to A-8 through PF 1  
but it still will not filter.

8/23/52 (1) Sampled Dry wells at 11 PM.

4-12 (2) Continued evaporating.

Schaeck (3) Finally filter last 5" to A-8 and put one  
water wash thru PF-1 & PF-2. Filter again  
plugged. Boiled this solution to dryness in  
A9 and started 2nd metathesis, using 5  
liters  $K_2CO_3$  (hot) thru each filter and 78# hot  
 $H_2O$  thru each filter. If this filters fast, do  
a 3rd Met. the same way. If not, proceed to  
cubicle when filtration is finished. A8 has  
8WC-1 plus about 5gal from A9. Did not sample  
this since the extra volume was so small and  
8WC-1 had 5400 cts S.T. Jet the 2nd & 3rd Meta  
thesis onto to this and then sample as  
8WC-2. Hold in A11. 8WC can be jetticed  
out if space is needed.

(4) toured FBI thru packing area.

8-24-52 1- Hosed out W-12 wet pit and W-3, 4, 10  
E-8 ~~W-1~~ Dry wells.

R.H.N.

12-  
Coa  
8-2

8/24

Scha

8/29  
4-1

LAMP

PM 12-8 2. Continued with Ral'd, finished the  
ions 2nd and third metathesis.  
the 8-28-52

3. Had to JET SNCH to A-5 for a  
sample, too much volume in A-8.

4. Run status.

A-1 MT

A-5 SNCH.

A-6 Neutralized waste.

A-8 Ready for second feed solution.

A-9 MT

A-11

A-17 MT

5. Transferred the prod. from A-9 to  
feed tank at 7:30 A.M.

Not

do 8/24/52 ① Schairch pulled a boner. He told Terry to  
do to 8-4 turn off the H.P. steam while JFOG was  
as Schairch sucking Versene feed to F.T. As a result, lines  
sample reading up to 10P over cubicle. [How stupid  
and can you get??]

Meta

② Continued evaporating

③ Ralu status: SNAFU. Verbal to 4-12.

8/29/52 ① Continued evaporating

9-12 ② Ralu status: Boiling down in P.E. ready to  
Lampton start fuming HNO<sub>3</sub>. Also boiling down  
EWG in A5. A9-A9 Rinse, A8-cubicle  
wastes, Rest verbal to 12-8

- 1- Had Pipefitters to clean the strainer  
8-25-82 on the A-5 jacket line which was 8/25  
12-8 completely plugged. 9-1.
- R.L.N. 2- Took a quick check through 4600 Area Lamp  
to locate & leak into WC-15 with  
no success.
- 3- Continued Evaporating WC50 IN A-5
- 4- Run status.  
All Cubicle waste except fuming.  
Nitric is in A-8. 8-26  
Prod. E&P has the 6 liters of water R.L.  
After the P.E. 2 sump, boiling down  
at shift change.
- 5- Brought down Pile units.

- 8/25/82 Continued evaporating.
- 8-4 ② Maintenance repairing WT sparger.  
Schaech ③ Old Lagoon - 11 tons 5", New Lagoon - 080  
④ WT pump connected wrong.  
⑤ 200ml fuming nitric transferred to cone  
but cone is stuck to charging head and  
could not view product. Did not start P.E.  
Rise.
- ⑥ Started Product Holdup. .5M NaCl  
going thru.
- ⑦ Cleaned and stored carriers. Another batch  
sparging in barrel.
- ⑧ Emptied all wastes except SWC + 8WT.  
They are boiling down in P.E.

NEN  
8/25/52 ① Continued Evaporating

9-12 ② Rala status: All SNAFU but good.

4102 Lampton serial to 12-8

③ Pile bldg. purging canal.

- 5 1- Pile Bldg. STOPPED Purging the CANAL.  
2- Had to Wind the ~~Chart Dri~~ to the

8-26-52 S.B. Flow INSTRUMENT.

12-8 3- Finished Boiling down solution in A-5  
R.L.N. and Jetted to A-9, Started EXTRAC-

4- Finished Boiling down the 9 M HNO<sub>3</sub>  
IN P.E. TANK and Transferred to the  
CONE.

5- Added 17 Liters of Water to the P.E.  
TANK and sampled as P.E. Rinse #2

6- Washed down the Cottrell Precipitator

7- Brought down 2 sulfur can.

8- Pump at H-7 would NOT PICK UP and  
circulate.

9- Made up 9.0 M HNO<sub>3</sub>, 90% K<sub>2</sub>CO<sub>3</sub> & Pb(NO<sub>3</sub>)<sub>2</sub>

10- Started Resin Replenishment on  
the third level water wash after the  
2nd. HCl on first cycles.

11- Rala status.

Q- 9.0 M HNO<sub>3</sub> EVAPORATIONS IN THE CONE  
Started at 5:50 A.M.

Q- A-9 the Recovery Batch EXTRAC-

TIONING to A-8 at Shift Change.

8/26/52 ① Continued evaporating.  
8-4 ② Made two more P.E. Rinses but no better  
Schaum results. Sampled #5 - 26, 300 c's A.T. 8/26  
③ Continued resin regeneration.  
④ Back washed resin from column.  
⑤ Recovery Run - 3rd Metathesis just starting.  
⑥ Repaired Brown Tele metering instrument.

8/26/52 ① Continued evaporating.  
~~4-12~~ ② Could not filter P.E. Rinse to MW before  
Lumpton the product was brought down put thru  
cone to A16

③ Hula Recovery Status:

Versen is in A4 ready to go to F.T.  
for pHing. NaOH elution is going  
thru column

A8 - 8WCW RECOVERY

A9 - VERSEN FEED

S TANK - IT FE

The rest verbal to shift.

8/27/52 - TOOK UP P-32 EXTRACTION AT 12:30 P.M.  
2-8 1. CONTINUED WITH R-12 THROUGH THE COLUMN  
UNTIL 3. STARTED THE P.E. TANK CLEAN UP AT 6:45 A.M.  
4. RUNNING H<sub>2</sub>O THROUGH THE COLUMN AT 2-100ML  
PER MIN. UNTIL THE P.E. TANK CLEAN UP IS  
FINISHED.  
5. FIRST 9.0 M HNO<sub>3</sub> BEING JETTED TO THE  
CONE. AND OUT TO A-16 AT SHIFT CHANGE.

8/27  
4-13  
LUMPTON

8/27/52 ① Maintenance pulled WT pump for repair

better ② Instruments pulled P.E. tank thermocouple.  
F. Schade Also working on M.H. 4149 sampler. Installed  
squegee pump until this is repaired. snot. Dip sample.

③ Continued evaporating but it is running rough.

④ Washed out P.E. tank with 9M HNO<sub>3</sub> but it  
still has Fe in it. Continued recovery run.

9M HNO<sub>3</sub> almost finished thru column at  
shift change. Water wash drying in cone  
at shift change. Check for dryness about  
6 PM.

⑤ Cleaned cubicle carriers. Some A cell  
carriers sparging in barrel.

⑥ Open six bottles fuming nitric.

⑦ Started making up regeneration solution  
3M HNO<sub>3</sub> - 0.98 OK

3M NaNO<sub>3</sub> -

.5M NaOH -

⑧ Started decontamination of Room 10 glassware  
H<sub>2</sub>O, LMK, oxalic, + NaOH washes from  
dist. rec. to flask. General background at  
beginning cor.

⑨ Hosing out "C" 3kg. valve pit at shift  
change.

⑩ 1<sup>st</sup> floor "D" 131dg smeared O.K.

8/27/52 ① Continued evaporating

9-12 ② P32 products in P-1 at shift change

Lampton ③ Continued decontamination of sulfur cans. (over)

④ Raku Status: M.U. tank - part of MW FN  
P.E. - 10 L 9M HNO<sub>3</sub> boiling down.  
A-E - MT and clean.  
Cone - clean and dry.

⑤ Do not do the 200 ml fuming HNO<sub>3</sub> PE to  
cone. Go ahead with PE Rinse.

1. Continued with P<sup>32</sup> Raku, settling in P-2  
8/28/52 till 8:15 A.M.

12-8 2. Continued with sulfur can decontamination.  
P.L.N. 3. Worked on Room 10 glassware, one of the  
hottest places is in a short piece of  
Tygon tube with a pinch clamp on it on  
top of the flask, it has some solids in it.

4. FINALLY GOT THE FUMING NITRIC THROUGH  
THE FILTER. L.S.T WAS 6:15 A.M.

5. JETTED FUMING NITRIC WASTE TO A-E AND  
SAMPLED.

6. PRODUCT BEING SUCKED OVER TO THE  
CONE AT SHIFT CHANGE.

8/28/52 ① Mainenance repaired steam reducer at EV.  
8-4 ② sampled all dry wells.  
Schaich ③ Back washed resin from column.  
④ Washed out all cabicle tanks. Made 1 wash  
thru P7 cell. 2<sup>nd</sup> wash in A9 ready to go to  
A-E samplers circulating.  
⑤ Cleaned and stored all but three cabicle

8/28/

9-1.

Lamp

samplers. They are reading up to 2R. Carriers sparging in barrel. Feet are in versene solution.

⑥ Product cone cooling at shift change. Could not get it off charging head.

⑦ Continued evaporating.

8/28/52 ① Took up  $P^{32}$  product and sampled

② Dry well of W8 - 926 c's/ml/min. The water Lampton level looked as if it dropped about 8' after the rain stopped. Washed out dry well. W8.

③ Cleaned up cubicle samplers except one and it is sparging in barrel.

④ Finished cell washes and back wash of P.F. including versene wash.

⑤ Put 1 liter of H<sub>2</sub>O in P.E. tank. Put 500 ml. HNO<sub>3</sub> down thermowell and blew through with air. Did not get any rise in L.L. of P.E. but the HNO<sub>3</sub> went some place because the air sparged the P.E. tank.

⑥ Tried to see what cause radio product loss using what was left of Run 50 recovery. The loss seems to be greatest when shaking the cone with high vacuum.

⑦ Some body left cubicle sampler washer (paper) on floor of decontamination room. Floor read up to 2 R/hr where they had laid.

- 9/23/52 ① Ran steam turbines four hours. Shut down  
 8-4 Cottrell at stack as well as all electric equipment  
 Blower so that electricians could tie 440 V. circuit  
 into switch for the pens from 4500 area  
 ② NaOH was dumped into W10 on 12-8 shift  
 $\text{PH} = 9$   
 ③ Made up 1st part of coating removal in  
 A-1. Loaded 48 slugs at shift change.  
 more to go. Fourth load at 3026 D ready to load.  
 ④ Arecheck of the P. evap. filter test gave a  
 result of 1.2 grams of Ba in the product.  
 ⑤  $3 \text{ M HNO}_3 = 2.94 \text{ N}$ . Resin Titration = ~~0.001~~  
 $1.844 \text{ N}$ , sp. gr. = 1.060  
 ⑥ Raised the L-L at evap. to 45" and  
 steam pressure to 55 p.s.i.  
 ⑦ Loaded one 8" slug for I-13, - started the  
 run. Dissolving ongoing at shift change.  
 ⑧ Electricians are running a new supply  
 to pump at 407. No more need of going to  
 Metal Recovery building for the pump's supply.  
 ⑨ Still building wall at the evap.  
 ⑩ Radiation readings are 300 m/r/hr at cask  
 holes, 25 m/r/hr through side of carien, 100 m/r/hr  
 flash out hands every time a blue drops.

1-Continued checking Russell's Ball Mill.

9/23/52 2-Continued with I-131 Dissolving.

4-12 3- Started unloading the fourth load of  
 F.L.N. Slugs into Dissolver, one slug soaked to  
 hang in slug chute so another slug was

RUN  
51

9/2  
12  
Sch

dropped on top of it so the two of them would not go down, so we started to close the slide on slug changer and found a third slug hung in the changer which we had to drive on through into the slug chute so there are at least three slugs hung up.

4- Started Running Coating Removal Sol. down the chute with no success at shift change.

5. Took another look at the slugs at 11:15PM, and found there <sup>were</sup> four slugs instead of three, no telling how many more.

9/24/52 ① Raised EV. pressure to 55#. SP.C.T. - 12-8 71 c/min.

Schaick ② checked FI dissolving.

- ③ checked Russell's ball mill.
- ④ continued sulfur can decontamination.
- ⑤ took up  $\text{Pb}^{2+}$  extracts, reextracted, + boiled down crude.
- ⑥ continued work on hung-slugs. was able to get two slugs to drop thru but there are still three in the chute. One loose & two jammed into the hole. Made up special tongs + probe, used shift exposure trying to pull them loose but no success. Continued running caustic over slugs. Suggest some kind of ice tong arrangement to pull them loose.

- ⑦ File purging canal at 6:30 AM.
- ⑧ Made up 900# NaOH in M-1.

- 9/24/52
- ① Replaced extension rods on crud filter valves
  - 8-4    ② FI second still cooling and product boiling Lampton down in Rm 10 at shift change.
  - ③ Unplugged Rul's slug chute and finished loading slugs. Second coating removal going at shift change. HP smeared 3rd floor and the slug changer is ready to go to 205 Blg.
  - ④ Evaporating at 92"LL and 60# steam pressure
  - ⑤ Still building wall at evaporator.

1- Continued Boiling down P-32 in EV-1 there is about 60-100 ml left to be boiled down.

2- Checked Russell's Ball Mill.

9/24/52 3- The third level shears OK.

4-12 4- Finished Boiling down I-1st in Room-10 R.L.N. and Standard Scrubben stills, taking cuts on second scrubben still at shift change.

5 Returned the slug changer to 2019 Blgs after went. Repaired the hooks for it.

6- Read Run status.

A-1 First Dissolving heating up.

9/25/

8-9

Lamp

- 9/25/52 ① WC-13 tank began filling at 2 A.M. Found 2-8 full stream of water coming from rubber which tubing which had popped out of cold drain

into hot drain. Left notice to have valve repaired. (Rm - D-1) Also Rm C-1 started  
② Finished FI stills, boiled down, and sampled F-1.

③ Checked Russell's ball mill.

④ Continued  $\text{P}^{32}$  thru glassware. Product in P-1 with 2nd  $\text{NH}_4\text{OH}$  wash on it.

⑤ Continued evaporating. Sp.C.T. after 1st batch of Rola came into EFT - 450 cts/min lowered press. to 50 psi. Took special C.T. at 7 A.M.

⑥ Run Status: A1 - Batch B dissolving

A5 -  $\text{Na}_2\text{CO}_3$

A9 - Batch A extraction

C.F. - Dirty

M-1 - getting caustic to M10

$\text{H}_2\text{O}$  going into M10.

9/25/52 ① Finished FI in Rm 10 except for taking up  
8-9 product. One half of product is at packing and  
Lampton The other half is in transfer pot ready to be  
taken up.

② Had a backup in A9 press. diff. manometer at panel board 101. The manometer has been removed but there is still a high background.

③ Rola Status: A1 - Batch C dissolving

A5 -  $\text{Na}_2\text{CO}_3$

A9 - Batch 13 digesting.

C.F. - Clean.

M-1 - Batch caustic. over

③ cont'd. A8 - 8WMA

A11, A11 - MT

④ Maint. bored out C.F. extension handles

⑤ Continued evaporating with out cutting back.

9/26

10-

SCH

1-Worked on decontamination of P.B. #1 there  
#25152 is still some spots reading 4 RI/HR and  
#-12 the manometer reads 100 RI/HR on Brass  
R.L.N. Tubing.

2-Maint had to straighten the Pile Bldg  
Tongs, No Welden on shift to <sup>Deltolanced to Pile</sup> Replace Tubing.

3-Checked Russell's Ball Mill.

4-Had inses. to repair the lead wire to the  
Signal light on Brown Recorder at Eu. Which  
was causing the fuse to blow.

5-Returned Cannon hooks to DECON. Bldg.

6-Batch B Filtered slow to A-17 took 5 hrs 40 min  
to filter, P.E.-1 plugged but kept blowing  
back until A-9 was MT.

7-Raid status.

A-1 Batch D DISSOLVING.

A-5 Batch  $\text{Na}_2\text{CO}_3$ .

A-6 Neutralized batch A.

A-9 Ready to start Extraction batch C.

A-8 Batch B. SAMPLE in the lab.

A-11 MT.

A-17 MT.

M-1 Batch of Caustic ready full M-10

& Pipe fitted sets it will take a Welden

9/26

8-4

LAMP,

to Repairs the leak in coil-N in the EOD.

Gallory.

§ Took up P<sup>32</sup> product and sampled, not very hot.

9/26/52 ① P<sup>32</sup> product - 1046 mc S.T. Regenerated 12-8 5-1, 5-2, & 5-3 and discarded waste after Schonle samples showed low loss. Took up 4<sup>th</sup> extracts and started boiling down. started reex-  
tractions for sulfur removal. taken to evode evap. E-1 has not been

- ② Jetted 716 gals from AG-W9. Had slight activity rise. Mainly in BB shops.
- ③ Used exposure time trying to decontaminate PB-1. Didn't accomplish much. stills reads up to 4R.
- ④ Checked Russell's Ball mill.
- ⑤ Continued evaporating. Had trouble starting this run. It wanted to foam.
- ⑥ Run status:- A1 - Batch E dissolving.  
A11. Batch D - Crud Filtering  
A8 - 8WMC

A9 - mt PF-2 product

C,F - Clean.

M-1 - Caustic for M-10

D5 - Na<sub>2</sub>CO<sub>3</sub>

9/26/52 ① Made a hot sink check.

- 8-4 ② Maintenance cocooned Rala product carrier.
- Lampton ③ Continued with decontamination of panel board #2
- ④ By-pass of coil E+N at E.V. was repaired.

⑤ Took more cuts from flask for FI in room 10.

⑥ Rala status: A<sup>1</sup> - Baln E ready to dilute.

A12A11, A5 - MT

A6 - 8WMC neutralized.

A8 - 8WMC unemptied.

M10 - Buffer caustic

M1 - Batch Na<sub>2</sub>CO<sub>3</sub>

⑦ Rala product truck parked by oldy 5515

1-Continued with P<sup>32</sup> pick up run dippings from S-2 to EV 2 at shift change.

2-Jetted 2" from H-10 to H-7 and the pump will not circulate & full line out

9/27/1

8-9

Lamp

126/52 of H-7.

4/12: 3-Continued decon of P.B. 1 Not much success.

R.L.H. 4-Rala status

A-1 Batch F dissolving up to temp. at 5:46pm.

A-5 Batch Na<sub>2</sub>CO<sub>3</sub>.

A-6 MT.

A-8 MT.

A-9 Batch - E filtering to A-17.

A-17 Batch E waste.

A-1 MT.

9/27/52 ① Continued P<sup>32</sup> run thru glassware. Product 12-8 in P-2. (ppt. at pH-7)

Schaick ② Continued evaporating.

③ Checked Evergreen.

④ Jetted 1" from 107-1000, tried pump, but

9/28/1

R.L.H.

4-12

10.

it sounded so bad we shut it down.

⑤ Run status A-1 - Holes

A5 -

A6 - 8WME Neut.

A8 - MT

A9 - MT

A11 - Batch F filtering

A17 - to A17

9/27/52 ① Shut off water spray and jet at Evergreen  
8-9 because water was running into street.

Lampton, ②  $P^{32}$  product is still in P-2 no isotope men on  
shift.

③ Turned on air sparger in W7 tank and  
adjusted.

④ Rala status: A1 - MT

A5 - Batch Na<sub>2</sub>CO<sub>3</sub>

A6 - 8WME Neut.

A8, A11 - MT

CF - CLEAN

A9 filtering to A17 Batch F

1. Cut Evaporation steam down to 20# h.l.

5/28/52 30" after taking two spec C.P. samples

R.L.N. that was 15.15 C/MIL and 13.85 C/MIL.

4-12 2.  $P^{32}$  being transferred from Final Evap  
to Product Transfer at shift change.

over

9-12 3. Rala status

CONT. A-1 - MT

A-5 -  $N_2CO_3$

A-6 - Neutralized waste.

A-9 - First metathesis filtering to A-17.

A-8 - 8WMF ready for A-5.

A - SPECIAL C.T. SAMPLE AT 11:00 WAS 388 C/mgal

9/28/52 ① Took up  $P^{32}$  recovery run and sampled. Yield  
12-8 was 2078 MC's.

Lumpton ② Continued evaporating

③ Rala status: A-1, A-11, A-5 - MT

A-6 - Neutralized waste

A-9 - 1st Metathesis filtering to A-17

A-9 - Part 1st. Metathesis waste

1. CONTINUED ~~—~~ Filtration of first metat.

from A-9 to A-17, after filters completely

9/28/52 Plugged we put 5 L 40% hot  $N_2CO_3$  through  
8-4 P.F. #2 and followed with 78% water this  
R.L.N. opened the filter some but it plugged  
again at 18" L.L. added 4 liters of  
hot water through P.F. 2 and it started  
filtering slow at shift change there is  
6 gal. left to filter.

2 - There is some product on P.F. 1 which  
~~—~~ is plugged also.

3 - Made up 40%  $N_2CO_3$  it is OK.

9/28

4-

Sch.

9/28

12-

Lan

9/29

8-4

R.L.

9/28/52 ① Finished filtering 1<sup>st</sup> Metathesis thru  
4-12 PF-1. Started 2<sup>nd</sup> Met. by making batch  
Schlaich thru each filter. Still filtering at shift  
change very slowly thru PF-1. PF-2 was  
used also so next metathesis will have to  
be doubled.

② Tank status:- A5 - 8WC (approx 4500cts) boiling  
A9 - 2<sup>nd</sup> Met. down.  
A17 - 2<sup>nd</sup> Met  
A1 - A6 - A-11 - A7 - MT

③ Continued evaporating 25"-35"-wides, Sp.C.T.  
340 cts/min.

9/29/52 ① Drained ventilation filter box

12-8 ② Continued evaporating at 25"-press and 35" LL.  
Lampton Sp.C.T.

③ Rulu status: A5 - 8WC boiled down  
A9 - 2<sup>nd</sup> met. waste  
A9 - A17 Met. No. 3  
A1 - A6 - A11 - MT

④ Battery on big truck is down.

⑤ Brought down pile units

1- Old Lagoon Reading 11 Tarnos and 9

9/29/52 2- Pipefitters Replaced the A-9 Press Drop  
8-4 INSE. ON P.B. # 1.

R.L.N. 3- New Lagoon Reading 0-01

4- Part of 5WC & 8WC is in A-11, Boiling  
down to receive the remainder of 5WC  
over

14 hitch is in A-8 if the vol. in A11  
can be reduced enough to hold A-8  
before the Cubicle waste transfers up.

5. Rala Product Transferring down to Cubicle  
at shift change very slow has been  
filtering since 12:30 P.M.

9/29/52 ① Verbal to 12-8. —

~~9-12  
7-8~~

Schaeck

9/30/52 ① Brought sulfur can to bldg 3032.  
12-8 ② Washed down cottrell precipitator.  
③ Rampton Rala status: A11 - SWC + 84SCW waste  
A8 - Resin cubicle waste  
A9 - PF Rinse  
FT - FT Rinse  
MW - HCl Elution waste  
PE - 1/2 Product Elution  
Hold-up - 1/2 Product Elution.

④ checked Russel's Ball mill.

⑤ Unofficial Results

FT P 24109

FTP 3000

8 Res Cub. Waste 530

F.T. Rinse 14

HCl Waste 20

A4 + P.F. Rinse 1616

9/30

8-

R.L

9/30

4-1

Scha

- 4-12) ① Finished transferring <sup>Acetate</sup> product to Feed tank  
② Had back-up in Feed tank sampler funnel when the last of the water wash behind the acetate feed had to be pushed thru the column. Funnel read >100R. Decontaminated to 25R. Covered chest with lead bags and continued with run.  
③ Versene feed came down slow but sure. The 8 liter water wash slowed down to a trickle. Blowing back gave about 0.1" from Hg. Since product had been on column 3 hrs at this point, decided to pH Versene and continue with run. Let approx 4 liters in Hg.  
④ 1<sup>st</sup> pH - 6.45 Added 5ml - Due to 500ml <sup>Acetate</sup> left in F.  
2<sup>nd</sup> pH - 6.5 added 5ml  
3<sup>rd</sup> pH - 6.1  
⑤ Versene feed went on column o.k. Water wash had to be pushed by placing 20# air on sampler line. This prevented back up.

7/30/52-1. Continued with Rate Run Ready to add  
8-4 the 6 liters of water for the P.E. 2  
R.L.H. at shift change.

- 2/10  
1. Raised E.V. to 35° L.L. 30# steam.  
3. Recirculated H-7 Slurry and pumped  
back to H-10 H-7 pump shuts off  
at 11" with a full line of solution.  
4. Received a Product Cone from Los  
Alamos Put it in the office at 3026-D.  
5. H-7 L.L. before pumping back was 1"?"  
H-10 10'3 H-7 after 11" H-10 ??  
6 Inst. Finished installing A-4 press, drop  
instrument.  
7. Jetted the part of SUC or sucral that  
was in A-5 to A-6 to hold until the  
Run is complete.

8 Run steam turbines 4 hours.

9/30/52①Continued evaporating.

4-12 ② Checked Russell ball mill.

Schaeck③ Run status: Product in cone (dry)  
M.W. - P.E. Rinse

A-8 - MWFN F.T.-F.T. Rinse

④ samplers do not work on P.E. tank.  
Also do not operate too well on feed  
tank. Had to sample PE Rinse in M.W. Tank.

⑤ Delivered two R.C.-200 carriers to packing  
bldg. Each carrier has a small amount of PE-2  
sample.

- 10/1/52 ① Finished loading Rala product carrier.  
 12-8 Product 13,500 c's and it left plant at  
 Lampton 5:00 AM 10/1/52. No fiber contamination.  
 ② Took up Pb extraction and boiled down.  
 ③ Checked Russells ball mill.  
 ④ Started Resin product hold up titration  
 and had a back up of resin into rotameter.  
 reading 72 R/hr. The rotameter was plugged  
 so a rig was made to put air pressure on the  
 eluate tank first shutting down Eluate L.L.  
 instrument. Reduced the reading at the  
 panel board to 500 ml/hr. but the lines to  
 the cubicle are reading 90 R/hr. The eluate  
 tank now contains  $\text{NaNO}_3$  for resin product  
 hold. Used up shift exposure trying to  
 decontaminate back up.  
 ⑤ Shift went down for chest X-ray.

- 10/1/52 1. Washed down Cottrell Precipitator.  
 8-4 2. Pipefitters Repaired Stock tank Between  
 Newton P.B. 4-A Y4-B.  
 3. Tried all shift to get the Eluate tank  
 to column unplugged with no success the  
 Eluate tank has  $\text{NaNO}_3$  in it with air  
 press on it with all valves from Eluate  
 tank through the column open.  
 4. Recirculated H-7 Slurry after pumping  
 from H-10 H-10 L.L. Before setting 10'7 after 10'9  
 H-7 before 10 $\frac{1}{2}$ " after 10" - 1'6"

10,  
4  
Sec.